1063-05-78 **Tom Bohman*** (tbohman@math.cmu.edu), **Alan Frieze** and **Eyal Lubetzky**. *Self-correcting estimates from the differential equations method.*

We discuss applications of the differential equations method for random graph processes in which the bounds on additive variation from the expected trajectory decrease as the process evolves. These methods are illustrated in the context of a randomized algorithm for finding a large collection of triples on n vertices with the property that no pair of vertices is in more than one triple. Our algorithm is as follows. We begin with the complete graph on n vertices and proceed to remove the edges of triangles one at a time, where each triangle is chosen uniformly at random from the collection of all remaining triangles. The algorithm terminates when it arrives at a triangle-free graph. We show that with high probability the number of egdes in the final graph is at most $n^{7/4}$ times a polylogarithmic factor. (Received August 06, 2010)